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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ZHOU, TING

ART UNIT PAPER NUMBER

2173

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,229

Applicant(s)

TRAN ET AL.

Examiner

Ting Zhou

Art Unit

2173

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/19/2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities: the use of "plurality of plurality of" on line 10 of claim 10 is redundant. It is suggested that the phrase be changed to -- plurality of --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-6, 8-10 and 13-20 are rejected under 35 U.S.C. 102(e) as being anticipated by McDonald et al. U.S. Patent 6,530,065.

Referring to claims 1 and 15, McDonald et al. teach a computer implemented method and program comprising segmenting the display into a plurality of regions (as shown in Figures 8A and 17, the display screen of the interface is segmented into a plurality of sections; for example, in Figure 17, the display contains a region for displaying controls such as “Choose a Part”, “Analyze a Design”, etc., and a region for “Components”) (column 14, lines 61-67 through column 15, lines 1-10), displaying, in a first of the plurality of regions, information associated with a netlist as a plurality of cell names, with the cells names being listed in a listing sequence and corresponding to the plurality of electrical functions (displaying a list of electrical circuit parts used to create a design, with the parts listed in alphabetical order according to the part name; furthermore, an alternate list of parts that can be used can be displayed on the screen if the user selects the “Select Alternate Part” button) (column 14, lines 61-67 through column 15, lines 1-10 and further shown in Figures 16A and 17), displaying in a second of the plurality of regions, a plurality of virtual buttons (GUI selectable icons/tabs such as “Choose a Part”, “Create a Design”, etc.) (Figure 17), a subgroup of which operates to commence testing of parameters of a set of the plurality of electrical functions, with the electrical functions included in the set being associated with a group of the plurality of cell names (controls such as “Analyze a Design” and the “Simulate” button allow users to test the designed circuit with the included parts and parameters) (column 8, lines 39-48 and Figure 17), and identifying, among the plurality of cell names, cell names affiliated with the group (selected parts/components of the circuit to be simulated are displayed in the “Components” Sections in Figure 17 and also displayed on the schematic shown in Figure 19) (column 14, lines 61-67 through column 15, lines 1-10).

Referring to claim 10, McDonald et al. teach a computer network comprising a server storing a netlist (column 5, lines 17-37 and further shown in Figure 1A), a client terminal (client's computer with a web browser displaying the webpage) (column 7, lines 1-20 and further shown in Figure 1B) having a display segmented into a plurality of regions (as shown in Figures 8A and 17, the display screen of the interface is segmented into a plurality of sections; for example, in Figure 17, the display contains a region for displaying controls such as "Choose a Part", "Analyze a Design", etc., and a region for "Components") (column 14, lines 61-67 through column 15, lines 1-10), with information, associated with a netlist, being displayed in a first of the plurality of regions, as a plurality of cell names, the cells names being ordered in a listing sequence and corresponding to the plurality of electrical functions (displaying a list of electrical circuit parts used to create a design, with the parts listed in alphabetical order according to the part name; furthermore, an alternate list of parts that can be used can be displayed on the screen if the user selects the "Select Alternate Part" button) (column 14, lines 61-67 through column 15, lines 1-10 and further shown in Figures 16A and 17), and a plurality of virtual buttons being displayed in a second of the plurality of regions (GUI selectable icons/tabs such as "Choose a Part", "Create a Design", etc.) (Figure 17), a subset of which operates to commence testing of parameters of a set of the plurality of electrical functions, with the electrical functions included in the set being associated with a group of the plurality of cell names (controls such as "Analyze a Design" and the "Simulate" button allow users to test the designed circuit with the included parts and parameters) (column 8, lines 39-48 and Figure 17), and the plurality of cell names affiliated with the group having a visually perceivable identifier associated therewith (selected parts/components of the circuit to be simulated are displayed in the "Components"

Section in Figure 17 and each component listed has associated therewith, a visual outline of the component, shown via the visual indicators displayed under the “Thermally Modelled” column) (column 14, lines 61-67 through column 15, lines 1-10).

Referring to claims 2 and 16, McDonald et al. teach selectively associating individual cell names with the group by effectuating a cursor event with respect to one of the plurality of virtual buttons and identifying among the plurality of cell names, cell names associated with the set of the plurality of electrical functions (users can associate parts/components with a circuit to be designed and simulated by using cursor events such as selecting the button “Select Alternate Part” and consequently selecting a part in the displayed list) (column 13, lines 51-67 and Figure 12).

Referring to claims 3 and 17, McDonald et al. teach each of the plurality of cell names corresponds to an address in the sequence that differs from the address corresponding to the remaining cell names in the sequence (each cell name, or part name has a corresponding address, or part number; for example, “593D475X0050D2T” is the part number for the part “Cin”) (Figure 17) and further including affiliating cell names with the group by effectuating a cursor event with respect to one of the plurality of virtual buttons and identifying among the plurality of cell names, cell names that correspond to a range of addresses in the sequence associated with the set of the plurality of electrical functions (users can use buttons such as “Select Alternate Part” and consequently selecting a part with a corresponding part number to associate parts/components with the designed circuit) (column 13, lines 51-67 and Figure 12).

Referring to claims 4 and 18, McDonald et al. teach selectively affiliating all of the cell names with the group by effectuating a cursor event with respect to one of the plurality of virtual

buttons and identifying all of the plurality of cell names (all of the components/parts of the circuit are tested when the user selects the “simulate” button on the interface) (column 8, lines 39-48 and column 21, lines 40-58).

Referring to claims 5, 13 and 19, McDonald et al. teach displaying a data entry field in a third of the plurality of regions to facilitate selecting, from multiple categories, a category of parameters of the set of the plurality of electrical functions to test (the user can input and select the desired parameters and components values to simulate; for example, the user can display a dialog box for a desired component and enter data values for the desired component and initiate a new simulation) (column 7, lines 1-20, column 8, lines 39-48 and column 11, lines 52-55).

Referring to claims 6, 14 and 20, McDonald et al. teach testing the parameters of the set of the plurality of electrical functions and displaying in a fourth of the plurality of regions information concerning results of the testing (a summary of the circuit simulation can be displayed, as shown in Figure 30, or a waveform resulting from the simulation can be displayed on the screen) (column 11, lines 52-67 through column 12, lines 1-33 and Figure 5A).

Referring to claim 8, McDonald et al. teach displaying a visually perceivable identifier with the cell names (a visual outline of the component is displayed with each part/component listed) (column 15, lines 6-10 and further shown by the visual indicators displayed under the “Thermally Modelled” column in Figure 17).

Referring to claim 9, McDonald et al. teach displaying a visually perceivable identifier with the cell name groups while maintaining the listing sequence (a visual outline of the component is displayed with each part/component listed, in the sequence each parts/component

is displayed) (column 15, lines 6-10 and further shown by the visual indicators displayed under the "Thermally Modelled" column in Figure 17).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald et al. U.S. Patent 6,530,065, as applied to claim 1 above, and Fan et al. U.S. Publication 2002/0188902.

Referring to claim 7, McDonald et al. teach all of the limitations as applied to claim 1 above. However, McDonald et al. fail to explicitly teach sequentially testing the parameters of the set of the plurality of electrical functions, with an order in which the electrical functions of the set are tested being independent of an order in which the cell names are arranged in the listing sequence. Fan et al. teach an interface for testing an integrated circuit with a plurality of parameters similar to that of McDonald et al. In addition, Fan et al. further teach sequentially testing the parameters of the set of the plurality of electrical functions, with an order in which the electrical functions of the set are tested being independent of an order in which the cell names are arranged in the listing sequence (the users can test the circuit sequentially with a test sequence created from selected listed parameters to associated with test patterns) (Fan et al.:

page 2, paragraphs 0013-0014). It would have been obvious to one of ordinary skill in the art, having the teachings of McDonald et al. and Fan et al. before him at the time the invention was made, to modify the method for testing circuit components of McDonald et al. to include the ordered testing of circuit parameters, taught by Fan et al. One would have been motivated to make such a combination in order to provide an accurate and systematic way for users to view the output results of circuit testing, thus allowing users to easily see which components caused a test error or failure.

4. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald et al. U.S. Patent 6,530,065, as applied to claim 10 above, and Kekic et al. U.S. Patent 6,664,978.

Referring to claim 11, McDonald et al. teach all of the limitations as applied to claim 10 above. However, McDonald et al. fail to explicitly teach the visually perceivable identifier consists of having a region of the computer surrounding cell names, affiliated with the group, displayed in a color that differs from displayed in the region surrounding the remaining cell names of the plurality of cell names. Kekic et al. teach a client-server network comprising a graphical interface for displaying a list of components similar to that of McDonald et al. In addition, Kekic et al. further teach the visually perceivable identifier for the components consists of having a region of the computer surrounding cell names, affiliated with the group, displayed in a color that differs from displayed in the region surrounding the remaining cell names of the plurality of cell names (each component, or outline of the component of the network can be displayed in a different color to indicate a different status of the component) (Kekic et al.:

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column 5, lines 51-65). It would have been obvious to one of ordinary skill in the art, having the teachings of McDonald et al. and Kekic et al. before him at the time the invention was made, to modify the computer network for testing circuit components of McDonald et al. to include the display of components in different colors, taught by Kekic et al. One would have been motivated to make such a combination in order to allow users to quickly and easily obtain considerable information about the status of a tested circuit component at a glance of the visual display.

Referring to claim 12, McDonald et al. teach all of the limitations as applied to claim 10 above. However, McDonald et al. fail to explicitly teach the visually perceivable identifier consists of an icon displayed adjacent to the cell names affiliated with the group. Kekic et al. teach a client-server network comprising a graphical interface for displaying a list of components similar to that of McDonald et al. In addition, Kekic et al. further teach the visually perceivable identifier consists of an icon displayed adjacent to the cell names affiliated with the group (displaying an icon with each component of the network displayed as a list of components in the navigation tree on the left hand side of the display) (Kekic et al.: column 23, lines 27-40, column 56, lines 66-67 through column 57, lines 1-2 and further shown in Figures 6A-6C). It would have been obvious to one of ordinary skill in the art, having the teachings of McDonald et al. and Kekic et al. before him at the time the invention was made, to modify the computer network for testing circuit components of McDonald et al. to include displaying an icon with each component, taught by Kekic et al. One would have been motivated to make such a combination in order to allow users to quickly and easily have access to and select components to be used as parts of a circuit design.

5. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The documents cited therein teach similar interfaces for testing circuit designs.
6. If a copy of a provisional application listed on the bottom portion of the accompanying Notice of References Cited (PTO-892) form is not included with this Office action and the PTO-892 has been annotated to indicate that the copy was not readily available, it is because the copy could not be readily obtained when the Office action was mailed. Should applicant desire a copy of such a provisional application, applicant should promptly request the copy from the Office of Public Records (OPR) in accordance with 37 CFR 1.14(a)(1)(iv), paying the required fee under 37 CFR 1.19(b)(1). If a copy is ordered from OPR, the shortened statutory period for reply to this Office action will not be reset under MPEP § 710.06 unless applicant can demonstrate a substantial delay by the Office in fulfilling the order for the copy of the provisional application. Where the applicant has been notified on the PTO-892 that a copy of the provisional application is not readily available, the provision of MPEP § 707.05(a) that a copy of the cited reference will be automatically furnished without charge does not apply.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ting Zhou whose telephone number is (703) 305-0328 through

the month of October, 2004 and (571) 272-4058 thereafter. The examiner can normally be reached on Monday - Friday 8:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached at (703) 308-3116 through the month of October, 2004 and (571) 272-4048 thereafter. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-8720 through the month of October, 2004 and (571) 273-4058 thereafter.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

9 September 2004



CAO (KEVIN) NGUYEN
PRIMARY EXAMINER